

Publications of the Week
RecV Recombinase System for *In Vivo* Targeted Optogenomic Modifications of Single Cells or Cell Populations

 First Author: Shengjin Yao ([pictured](#)) | Senior Author: Ali Cetin
 Nature Methods | Allen Institute for Brain Science and UW


Brain circuits comprise vast numbers of interconnected neurons with diverse molecular, anatomical and physiological properties. To allow targeting of individual neurons for structural and functional studies, the authors created light-inducible site-specific DNA recombinases based on Cre, Dre and Flp (RecVs). RecVs can induce genomic modifications by one-photon or two-photon light induction *in vivo*.

[Abstract](#)
Dimensionality Reduction by UMAP to Visualize Physical and Genetic Interactions

 First Author: Michael Dorritt ([pictured](#)) | Senior Author: Cole Trapnell
 Nature Communications | UW


Dimensionality reduction is often used to visualize complex expression profiling data. The authors used the Uniform Manifold Approximation and Projection (UMAP) method on published transcript profiles of 1484 single gene deletions of *Saccharomyces cerevisiae*. Proximity in low-dimensional UMAP space identified groups of genes that correspond to protein complexes and pathways, and found novel protein interactions, even within well-characterized complexes. [Abstract](#)

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Awards
Three UW Students Selected as 2020 Goldwater Scholars

UW News



Three undergraduate students at UW, including Karen Zhang ([pictured](#)), are among 396 around the country who have been named Goldwater Scholars for 2020. The Goldwater Scholarship Program supports undergraduates who "show exceptional promise of becoming this nation's next generation of research leaders" in science, technology, engineering and mathematics. [Read More](#)

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Local News
Scientists Look at Immune Response to COVID-19 for Answers

UW Medicine



Two studies are underway in the Chu lab in the fight against coronavirus. Dr. Helen Chu ([pictured](#)), a UW Medicine infectious diseases expert and researcher, is looking into different aspects of the disease and how the body might overcome it. One of the studies will take a look at remdesivir, an experimental antiviral. For the second study, Chu is enrolling adults who were diagnosed as positive for COVID-19 in a lab-confirmed test. [Read More](#)

Self-Assembling, Donut-Shaped Nanoparticles Form Novel Platform for Development of New Biomolecules

Fred Hutch



Dr. Colin Correnti ([pictured](#)) and fellow scientists at Fred Hutch have described self-assembling, donut-shaped protein nanoparticles designed from scratch. The team has shown that the nanoparticles, which can act as scaffolds for the organization and display of biomolecules currently used in various clinical and research applications, could someday enhance these applications. [Read More](#)

Study to Ask: Does Antimalarial Drug Prevent COVID-19?

UW Medicine



Researchers are investigating whether hydroxychloroquine, a commonly used anti-malarial and autoimmune-disease treatment, can prevent COVID-19. A multi-site clinical trial led by Dr. Ruanne Barnabas ([pictured](#)) at the UW School of Medicine aims to definitively determine whether hydroxychloroquine can prevent transmission in people exposed to the virus. [Read More](#)

COVID-19 Detectives Are on the Case but Lack Funds

Fred Hutch



The researchers behind [Nextstrain.org](#), which was co-created by scientists at Fred Hutch and the University of Basel, are using genetic clues to track the virus' spread and evolution in near real-time. Their work is helping countries and policymakers develop strategies to monitor and control outbreaks to save lives. But as fast as the science — and the virus — are moving, the financial resources needed to expand that global sequencing work have lagged. [Read More](#)

Developing Better Kidney Disease Models in Microgravity

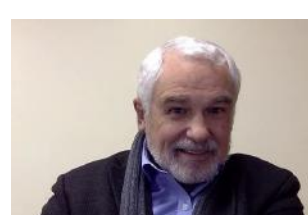
ISS National Lab



Microgravity induces rapid changes in body systems, and spaceflight studies can provide accelerated models of disease. In their first International Space Station National Lab investigation, which launched on SpaceX's 17th commercial resupply mission last year, Dr. Cathy Yeung ([pictured](#)) and her team at the UW School of Pharmacy used their kidney-on-a-chip model to examine kidney structure and function in microgravity. [Read More](#)

Washington Researcher Helped Develop Technology for New Rapid Coronavirus Test

KING 5 News



Coronavirus testing is expected to make a big leap forward this week as a new test will be released that can give results in as little as five minutes. The FDA has allowed Abbott Labs, a medical devices and health care company, to roll out the test. That test is based on technology from the early 2000s by Dr. David Galas ([pictured](#)), who is now with the Pacific Northwest Research Institute. [Read More](#)

Entrepreneuring Graduate Leads Biotech Firm

UW Bothell



Among the accomplishments Adina Mangubat ([pictured](#)) lists on her LinkedIn page is her Forbes magazine "30 under 30 — Science and Health" recognition that places her among the "entrepreneurial, creative and intellectual best of their generation." She also proudly includes winning the 2009 Hell Night business plan competition at UW Bothell. The business plan that her team pitched evolved into Spiral Genetics. [Read More](#)

COVID-19 Therapeutics Accelerator Awards \$20 Million in Initial Grants to Fund Clinical Trials

Mastercard



UW has received a \$20 million grant from the COVID-19 Therapeutics Accelerator, which is funding clinical trials to identify highly potent immunotherapies for the COVID-19 pandemic. These grants mark the first investments to come from the COVID-19 Therapeutics Accelerator, a large-scale initiative launched by the Bill & Melinda Gates Foundation, Wellcome, and Mastercard to speed the development of and access to therapies for COVID-19. [Read More](#)

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Upcoming Events in Seattle

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| April 7
6:00 PM | Hack the Performance Review, with Collaborator: Success Bully
Online |
| April 8
9:00 AM | Webinar: Deciphering the Cell Cycle – The Role of Cell Cycle Control in Cancer
Online |
| April 9-10
8:00 AM | Microbiome Symposium
Online |
| April 10
12:00 PM | Fundamentals for Startups: Negotiating Startup Life through a Crisis
Online |
| April 20
9:00 AM | Webinar: Hematopoietic Cell Therapy Products – Determining Potency and Stability
Online |

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 Allen Institute for Immunology
- Scientist, Quantitative Cell Biologist**
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